AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1.   (Currently Amended)   In a system for processing document images, a method for antialiasing at least one input image to provide an antialiased image, comprising ~~the steps of~~:

receiving the input image;

processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter operation including ~~the steps of~~:

(1) determining one or more regions within the received image,

(2) ~~upon~~ detecting that at least one of the one or more determined ~~region~~ regions ~~containing~~ contains pixels having pixel values of a background image level that ~~adjoins~~ adjoin pixels of an unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values, thereby identifying an edge of the unsaturated image object, and

(3) setting ~~the~~ pixel values of edge pixels ~~in~~ of the edge of the unsaturated image object to obtain a desired uniformity of edge pixel values for the unsaturated image object in the at least one detected region ~~be substantially the same value~~; and

outputting the antialiased image.

2.   (Original)   The method of claim 1, wherein the received image further comprises a digital image and the operation of the antialiasing filter further comprises determining a region of the digital image by extracting an observation window of neighboring pixels at a target location.

3.   (Original)   The method of claim 2, wherein the received digital image further comprises super resolution pixels.

4.   (Original)   The method of claim 3, wherein the antialiasing filter operation further comprises operation of an order-statistic filter applied to the super resolution pixels within the observation window.

5.   (Currently amended)   The method of claim 3, wherein the operation of the antialiasing filter further comprises ~~the steps of~~ forming an address based on counting similar values within the observation window, and employing the address for indexing a table of values to determine the pixel values of the edge pixels.

6.   (Original)   The method of claim 2, wherein the pixel resolution of the received image is at or above a value that is an integer multiple of the pixel resolution of the antialiased image.

7.   (Currently amended)   The method of claim 2, wherein the operation of the antialiasing filter further comprises ~~the steps of~~ receiving a tag identifying one or more pixels in the input image, the one or more identified pixels being selected for processing by the antialiasing filter, and in response processing the one or more identified pixels.

8.   (Original)   The method of claim 1, wherein the received image is provided in the form of a page description language.

9.   (Currently amended)   The method of claim 8, wherein ~~the operation of the antialiasing filter further comprises the steps of~~ setting the ~~gray~~ pixel values of the ~~edges~~ edge pixels ~~of the image object by~~ comprises: ~~inserting~~ fitting a page description language object into the ~~output antialiased~~ image, the inserted page description language object having predetermined pixel values, to establish a border on the unsaturated image object.

10.   (Currently amended)   In a system for processing document images, a method for antialiasing ~~at least one~~ an input image to provide an antialiased image, comprising ~~the steps of~~:

receiving the input image;

processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter operation including ~~the steps of~~:

(1) for each target pixel in the image, selecting ~~at least~~ one of a logical filter operation and an averaging filter operation, ~~said selection being determined according the pixel level of selected pixels in an image object present in the received input image~~ wherein the logical filter operation is selected for unsaturated pixels adjoining background portions of the image including pixel values that are within a predetermined range of limit values and the averaging filter operation is selected for all other pixels, and

(2) applying the selected filter operation ~~to the image object~~ for each target pixel in the image, thereby ~~to produce~~ producing the antialiased image, wherein ~~the~~ any unsaturated image object in the antialiased image exhibits edge ~~pixel~~ pixels ~~values that are substantially uniform around the image object~~ having a desired uniformity of pixel values; and

outputting the antialiased image.

11.   (Original)   The method of claim 10, wherein the received input image further comprises a digital image and the operation of the antialiasing filter further comprises determining a region of the digital image by extracting an observation window of neighboring pixels at a target location.

12.   (Original)   The method of claim 11, wherein the received digital image further comprises super resolution pixels.

13.   (Original)   The method of claim 12, wherein the selection of logical filter operation and averaging filter operation further comprises the step of examining pixel values within an observation window.

14.   (Currently amended)   The method of claim 13, wherein the operation of the antialiasing filter further comprises the step of application of an order-statistic filter to the super resolution pixels within the observation window, wherein an order-statistic result is used to set the edge values of the image object.

15.   (Currently amended)   The method of claim 13, wherein the operation of the antialiasing filter further comprises the steps of forming an address based on counting similar values within the observation window, and using the address for indexing a table of values to set the edge values of the image object.

16.   (Original)   The method of claim 10, wherein the received input image is provided in the form of a page description language.

17.   (Currently amended)   In a system for processing document images, apparatus for antialiasing at least one input image to provide an antialiased image, comprising an image processing unit operable for receiving the input image and for processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter being operable to:

(1) determine one or more regions within the received image;

(2) detect a region containing a background image level that adjoins an

unsaturated image object having unsaturated pixel values in a range other than a predetermined range of limit values;

(3) set the pixel values of edge pixels of the unsatureated image object to ~~be substantially the same value~~have a desired uniformity of pixel values; and

(4) output the antialiased image.

18. (Currently amended) In a system for processing document images, apparatus for antialiasing at least one input image to provide an antialiased image, comprising an image processing unit operable for receiving the input image and for processing said received input image by operation of an antialiasing filter to create an antialiased image, the antialiasing filter being operable to:

(1) for each target pixel in the image, select ~~at least~~ one of a logical filter operation and an averaging filter operation, ~~said selection being determined according the pixel level of one or more pixels in an image object present in the received input image~~wherein the logical filter operation is selected for unsaturated pixels adjoining background portions of the image including pixel values that are within a predetermined range of limit values and the averaging filter operation is selected for all other pixels;

(2) apply the selected filter operation ~~to the image object~~for each target pixel in the image, thereby ~~to produce~~producing the antialiased image, whereby ~~the~~ any unsaturated image object in the antialiased image exhibits edge pixel values having a desired uniformity of pixel values~~that are substantially uniform around the image object~~; and

(3) output the antialiased image.